

Please amend the application as follows:

In the Claims

Please amend Claims 1, 12, 20, 21, 32 and 41-44 as follows.

- B1
1. (Twice Amended) An exit window for an electron beam emitter through which electrons pass in an electron beam, the exit window comprising:

an exit window foil of titanium about 12 microns thick or less having an interior and an exterior surface; and

a corrosion resistant layer having high thermal conductivity formed over the exterior surface of the exit window foil for resisting corrosion and increasing thermal conductivity.

- B2
12. (Twice Amended) An electron beam emitter comprising:

a vacuum chamber;

an electron generator positioned within the vacuum chamber for generating electrons; and

an exit window on the vacuum chamber through which the electrons exit the vacuum chamber in an electron beam, the exit window comprising an exit window foil of titanium about 12 microns thick or less having an interior and an exterior surface, and a corrosion resistant layer having high thermal conductivity formed over the exterior surface of the exit window foil for resisting corrosion and increasing thermal conductivity.

- B3
20. (Amended) The emitter of Claim 12 in which the corrosion resistant layer includes a material having a density above .1 lb./in.³ and thermal conductivity above 300 W/m.k.

21. (Twice Amended) A method of forming an exit window for an electron beam emitter through which electrons pass in an electron beam comprising:

providing an exit window foil of titanium about 12 microns thick or less having an interior and an exterior surface; and

B3
cont

forming a corrosion resistant layer having high thermal conductivity over the exterior surface of the exit window foil for resisting corrosion and increasing thermal conductivity.

- B4
32. (Twice Amended) A method of forming an electron beam emitter comprising:
- providing a vacuum chamber;
 - positioning an electron generator within the vacuum chamber for generating electrons; and
 - mounting an exit window on the vacuum chamber through which the electrons exit the vacuum chamber in an electron beam, the exit window comprising an exit window foil of titanium about 12 microns thick or less having an interior and an exterior surface, and a corrosion resistant layer having high thermal conductivity formed over the exterior surface of the exit window for resisting corrosion and increasing thermal conductivity.
-

- B5
41. (Amended) An exit window for an electron beam emitter through which electrons pass in an electron beam, the exit window comprising:
- an exit window foil of titanium about 12 microns thick or less having an interior and an exterior surface; and
 - a corrosion resistant layer having high thermal conductivity formed over the exterior surface of the exit window foil for resisting corrosion and increasing thermal conductivity, the exit window foil and the corrosion resistant layer each having a thickness, the thickness of the corrosion resistant layer being about 4% to 8% the thickness of the exit window foil.
42. (Amended) An exit window for an electron beam emitter through which electrons pass in an electron beam, the exit window comprising:
- an exit window foil of titanium having an interior and an exterior surface; and

a corrosion resistant layer having high thermal conductivity formed over the exterior surface of the exit window foil for resisting corrosion and increasing thermal conductivity, the corrosion resistant layer comprising diamond.

- BS
Cat
43. (Amended) A method of forming an exit window for an electron beam emitter through which electrons pass in an electron beam comprising:
- providing an exit window foil of titanium about 12 microns thick or less having an interior and an exterior surface; and
 - forming a corrosion resistant layer having high thermal conductivity over the exterior surface of the exit window foil for resisting corrosion and increasing thermal conductivity, the exit window foil and the corrosion resistant layer each having a thickness, the thickness of the corrosion resistant layer being about 4% to 8% the thickness of the exit window foil.
44. (Amended) A method of forming an exit window for an electron beam emitter through which electrons pass in an electron beam comprising:
- providing an exit window foil of titanium having an interior and an exterior surface; and
 - forming a corrosion resistant layer having high thermal conductivity over the exterior surface of the exit window foil for resisting corrosion and increasing thermal conductivity, the corrosion resistant layer comprising diamond.

Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages i - iii).